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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,793	12/20/2000	Michael E. Oliver	50-00-006 (014208.1371)	8452

7590 10/01/2004

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EXAMINER

BOYCE, ANDRE D

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/742,793

Applicant(s)

OLIVER, MICHAEL E.

Examiner

Andre Boyce

Art Unit

3623

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-25 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/20/00.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-25 have been examined.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9, 13, 16, 17, 21, and 24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9, 13, 21, and 24 recite the limitation "the data file". There is insufficient antecedent basis for this limitation in the claims.

Claims 9, 13, 21, and 24 are rendered vague and indefinite. The claims include the limitation "and combinations thereof", which does not clearly define the scope (i.e., metes and bounds) of the claim.

Claims 16 and 17 recite the limitation "the software program and computer". There is insufficient antecedent basis for this limitation in the claim.

Claim 17 also recites the limitation "the historical earned value". There is insufficient antecedent basis for this limitation in the claim.

Claims 16 and 17 are also rendered vague and indefinite. The claims begin "The system of claim 14", however claim 15 is a method claim.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 14, 15, and 18-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter.

For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case independent claim 14 receives data from a software file, which is considered a nominal use of technology and not considered a functional portion of the invention. Therefore, the claims do not advance the technological arts. Contrarily, claims 16 and 17 include the software and computer operable "to determine", which is included within the technological arts.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case the claimed invention determines and displays cost depletion date information, thereby producing a useful, concrete, and tangible result, but not within the technological arts as explained above.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oliver (USPN 5,907,490), in view of Powell (USPN 5,291,397).

As per claims 1 and 2, Oliver discloses a system monitoring and assessing the performance of a project, the system (project management system 110, figure 3) comprising: computer; software program associated with the computer, software program and computer (computer 120 and software program 52, figures 3-4) operable in combination to: receive project task data and earned value information from a project management software file (information delivered from software 56) or a historical data file (historical data file 60, figure 4). Oliver does not explicitly disclose determining cost depletion date (CDD), display the cost depletion date

information, and the CDD information including depletion date related information.

Powell discloses an up to date report that gives actual costs and deviations from the budget, to provide a warning to management, for that particular date (i.e., cost depletion date, column 10, lines 47-53). Both Oliver and Powell are concerned with effective project management, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a CDD in Oliver, as seen in Powell, thereby providing management with additional pertinent information, in order to facilitate more efficient and effective decision making, with respect to cost and budget constraints of the project.

As per claim 3, Oliver discloses the software program and computer are further operable to determine historical, present, and projected earned value information; and display the historical, present, and projected earned value information (column 8, lines 16-20).

As per claim 4, Oliver does not disclose determining the CDD information by accessing a historical data file. Powell discloses cost memory fields 43 and 44, whereby information may be accessed (column 10, lines 25-27). Both Oliver and Powell are concerned with effective project management, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include determining the CDD information by accessing a file in Oliver, as seen in Powell, thereby providing management with additional pertinent information, in order to facilitate more efficient and effective decision making, with respect to cost and budget constraints of the project.

As per claim 5, Oliver discloses determining the historical earned value information by decomposing project task data (column 10, lines 1-4).

As per claim 6, Oliver discloses calculating a cumulative cost performance index (CPI) and cumulative schedule performance index (SPI) current reporting date (CRD) from the project task data, or the earned value information, or both (i.e., SPI/CPI graph showing the cumulative track performance to date, column 10, lines 52-59); and utilizing the cumulative CPI and SPI calculate a cumulative actual cost work performed (ACWP) and a cumulative budgeted cost of work performed (BCWP) for each reporting period from the CRD to a project baseline finish date (i.e., calculating for each reporting period, between the baseline project start date and the current data, the BCWP, ACWP, etc., column 8, lines 12-16). Oliver does not explicitly disclose determining cost depletion date which cumulative actual cost of work performed (ACWP) is equal to or greater than the budget at completion (BAC). Powell discloses an up to date report (i.e., cumulative) that gives actual costs and deviations from the budget, to provide a warning to management, for that particular date (column 10, lines 39-41 and 47-53). Both Oliver and Powell are concerned with effective project management, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include actual costs and deviation from budget in Oliver, as seen in Powell, thereby providing management with additional pertinent information, in order to facilitate more efficient and effective decision making, with respect to cost and budget constraints of the project.

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As per claims 7 and 11, Oliver discloses the reporting period is selected from the group consisting of a day, a week (e.g., reporting period of weeks, column 8, lines 13-15), month, a quarter, year, and a decade.

As per claim 8, Oliver does not explicitly disclose the cumulative cost performance index (CPI) cumulative schedule performance index (SPI) are replaced by arithmetic, weighted arithmetic, geometric, or harmonic mean statistical CPI and SPI obtained from the SPI and CPI from each reporting period from a start date to the current reporting date. However, the Examiner takes Official Notice that arithmetic, weighted arithmetic, geometric, and harmonic mean methods are old and well known in the art as statistical methods of determining data. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include replacing the cumulative CPI and SPI with arithmetic, weighted arithmetic, geometric, or harmonic mean, in Oliver, as an efficient means of substituting the cumulative CPI and SPI data in the Oliver system.

As per claims 9 and 13, Oliver discloses storing in the data file for each reporting period from the CRD a project baseline finish date information (i.e., calculating for each reporting period, between the baseline project start date and the current data, the BCWP, ACWP, etc., column 8, lines 12-16) selected from the group consisting of the cost depletion date, the calculated cumulative actual cost of work performed (ACWP), the calculated cumulative budgeted cost of work performed (BCWP), the corresponding reporting period, and combinations thereof.



As per claim 10, Oliver discloses calculating a cumulative cost performance index (CPI) and cumulative schedule performance index (SPI) at a current reporting date (CRD) the earned value information, or both (i.e., SPI/CPI graph showing the cumulative track performance to date, column 10, lines 52-59); and utilizing the cumulative CPI and SPI calculate a cumulative actual cost of work performed (ACWP) and a cumulative budgeted cost work performed (BCWP) for a successive reporting period following the CRD (i.e., calculating for each reporting period, between the baseline project start date and the current data, the BCWP, ACWP, etc., column 8, lines 12-16). Oliver does not explicitly disclose setting a cost depletion date equal to the reporting period being analyzed if the cumulative actual cost of work performed (ACWP) equal or greater than the budget at completion (BAC); wherein the last two steps are repeated each successive reporting period until a project baseline finish date is reached. Powell discloses an up to date report (i.e., cumulative) that gives actual costs and deviations from the budget, to provide a warning to management, for that particular date (column 10, lines 39-41 and 47-53). Further, Powell discloses the report able to be completed at any time during the project, thereby repeating the process. Both Oliver and Powell are concerned with effective project management, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include actual costs and deviation from budget in Oliver, as seen in Powell, thereby providing management with additional pertinent information, in order to facilitate more efficient

and effective decision making, with respect to cost and budget constraints of the project.

As per claim 12, Oliver does not disclose statistically analyze plurality cost depletion dates to obtain a probability of each cost depletion date; and display the plurality of cost depletion dates and their corresponding probabilities. However, the Examiner takes Official Notice that statistically analyzing data in order to obtain a corresponding probability of the data is old and well known in the art. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to statistically analyze and display a plurality cost depletion dates to obtain a probability of each cost depletion date, in Oliver, as an efficient means of determining the likelihood of particular depletion dates, thereby facilitating more efficient and effective decision making, with respect to cost and budget constraints of the project.

Claims 14-25 are rejected based upon the rejection of claims 1, 2, 4-11, 13, and 12, respectively, since they are the method claims corresponding to the system claims.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Higgins et al (USPN 6397202) disclose projecting a plurality of risk levels.

- Heckman et al (USPN 5875431) disclose a strategic planning control system.

-Knudson et al (USPN 5765140) disclose a dynamic project management system.

-Ito (USPN 5761674) disclose an integrated construction project management system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Boyce whose telephone number is (703) 305-1867. The examiner can normally be reached on 9:30-6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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